Public Water System
Emergency Plan Guide

(for community systems serving 501 people or more)

New Hampshire Administrative Rule Env-Ws 360.15 requires community public water systems to have a formal emergency plan. Emergency plans are action steps to follow should a primary source of drinking water become contaminated or the flow of water disrupted. Emergency plans for community systems serving 500 or more people must be reviewed annually by the water system and an updated plan submitted to the DES at least every 6 years beginning March 15, 2003.

The purpose of this emergency plan guide is to help you understand and meet the basic standards for an emergency plan as set forth in Env-Ws 360.15. An emergency plan helps to: (1) establish a protocol for the management and staff of a water system to follow in case of an emergency, and (2) help a water system reduce its vulnerability to emergencies. Fill in all boxes or circle "yes" or "no" where required. A completed sample plan is available for your further reference and assistance.

Section 1. System Identification

System EPA Identification Number		
System Name		
Town		
Source ID/Type/Description/Well Yield (from DES records)		gpm
Source ID/Type/Description/Well Yield (from DES records)		gpm
Source ID/Type/Description/Well Yield (from DES records)		gpm
Source ID/Type/Description/Well Yield (from DES records)		gpm
Population Served/# Service Connections (from DES records)	people	connections
Date of most recent emergency plan in DES records		
Name, Title, and Phone Number of person responsible for maintaining this emergency plan.	name and title	phone

Section 2. Chain-of-Command

A water system must have and maintain an up-to-date organizational chain-of-command that identifies who is responsible for making decisions during an emergency. **The first response step** in an emergency is to inform the person at the top of your chain-of-command. This will reduce confusion and optimize response speed and effectiveness. Your emergency plan must include a flow chart listing names, titles, and day/night phone numbers. Additionally, the system must determine the responsibilities of each key person during an emergency, i.e., what each person's role will be. **Attach your chain-of-command flow chart and a brief description of each person's responsibilities during an emergency.**

Section 3. Notification

It may be necessary to quickly notify other parties during an emergency situation. Other parties might include your water system users, health officials, safety officials, regulatory personnel, and service/repair providers. Please fill out the lists on the next page. The following lists are not intended to be inclusive – they may be adapted to your specific needs, but they must be thorough. Attach any additional listings that you consider appropriate. The level of effort needed for notification will vary greatly depending on the size of the system and the nature of the emergency. All systems should plan ahead how you will accomplish notification. **Attach your notification procedure.**

Local Notification List

Fire Dept day	Fire Dept night
Police Dept day	Police Dept night
Ambulance service day	Ambulance service night
Emergency Management Office day	Emergency Management Office night
Health Office day	Health Office night
Local Newspaper day	Local Newspaper night
Local Radio Station day	Local Radio Station night
Local Radio Station day	Local Radio Station night
Other	Other
Other	Other

State Notification List

State Police day 1-800-852-3411	State Police night 1-800-852-3411
Water Supply Engineering Bureau day 271-2513 or 271-3503	Water Supply Engineering Bureau night 271-2513 or 271-3503
Office of Emergency Management day 271-2231 or 1-800-852-3792	Office of Emergency Management night 271-2231 or 1-800-852-3792
Public Health Services day 271-4496	Public Health Services night 271-4496
Other	Other

Service/Repair Notification List

Electrician day	Electrician night
Electric Utility day	Electric Utility night
Plumber day	Plumber night
Pump Specialist #1 day	Pump Specialist #1 night
Pump Specialist #2 day	Pump Specialist #2 night
Soil Excavator #1 day	Soil Excavator #1 night
Soil Excavator #2 day	Soil Excavator #2 night
Hydrogeologic Consultant day	Hydrogeologic Consultant night
Emergency Response Consultant day	Emergency Response Consultant night
Equipment Rental day	Equipment Rental night
Other	Other
Other	Other

Unique Water System Users
In an emergency, your water system may have to provide priority notification to users with unique or special water needs. Unique or special users would include nursing homes, elderly housing facilities, and hospitals. Water systems must identify and maintain an up-to-date list of service customers with unique water needs and make provisions for safe and adequate water supply to them.

Does this system have service customers with unique water needs?	Yes No

If you circled "Yes" above, please attach your list of unique service customers and a brief description of how you will notify them and provide for their water needs.

Section 4. System Components

It is essential that a water system have accurate up-to-date information about its facilities, equipment, and design. This information will help facilitate repair in case of an emergency and will also be valuable in assessing system vulnerability to an emergency.

System Equipment
Please attach an up-to-date list of your facilities and major equipment. List at least each active well, each operable inactive well, total production capacity of each active and operable inactive well, each storage tank, capacity of each storage tank, each treatment facility, each pump house, and important repair equipment. Few water systems serving 501 or more people have atmospheric storage tanks. However, if you do, indicate whether or not it is equipped with a capped and lockable fill pipe to accommodate tank truck water delivery. Please note that Env-Ws 372.24 requires that all atmospheric storage tanks be equipped with a capped and lockable fill pipe by January 01, 2007.

Does this system have an atmospheric storage tank? If yes, how many?	Yes No _____ # tanks
Are your atmospheric storage tank(s) equipped with a fill pipe for supplied water?	Yes No n/a

If you answered "No" above, please indicate in the box below when your atmospheric storage tanks will be equipped with fill pipes for tank truck water delivery.

System Plan
Include an up-to-date, accurate, plan of your system that shows at least the locations of all individual wells (active and inactive), water treatment facilities, storage tanks, major distribution lines, and key shutoff points for isolating sections of your distribution system. The plan must be easily legible and drawn in a manageable scale. DES has well and distribution system locations in its geographic information system database and could provide you with maps or electronic data if needed. Some systems may be concerned with providing this information to DES since it becomes available to the public once it has been submitted. If you have this concern, please do not submit your plan. Instead provide an explanation regarding the status of your plan and DES will review the plan during sanitary surveys.

Hydraulic Connection Between Sources
A contamination event may not impact all your production wells. However, contamination in one well could impact another well if they are hydraulically connected, i.e., contaminated water is drawn into an uncontaminated well when it is pumped. Knowing the hydraulic connection between your production wells (if any) enables you to assess the extent that contamination in any single well will impact total production capacity. If pumping a single well results in drawdown in other wells, hydraulic connection exists between those wells. Pumping rates can also influence hydraulic connection. **Attach a description of the hydraulic connection between your producing wells.** A detailed hydrogeologic evaluation is not necessary; you may base your description on existing information.

System Demand
During an emergency, a water system may need to reduce its demand or utilize its excess capacity to continue to provide safe water to its users. **Attach a discussion of how this system could utilize demand reduction and excess capacity during an emergency and answer the following questions.**

What is the total production capacity of this system?	gallons per day
What is the total storage capacity of this system?	gallons
What is the average daily demand of this system?	gallons per day
What is the maximum daily demand of this system?	gallons per day
Divide total storage capacity by average daily demand.	days

Section 5. Vulnerability Assessment (Required only for systems serving 3,300+)

Env-Ws 360.15 does not require you to submit a vulnerability assessment as discussed in this section. However, The Bioterrorism and Response Act (H.R. 3448) does require community systems that serve 3,300 people or more to conduct a vulnerability assessment and prepare or revise, where necessary, an emergency response plan that incorporates the results of the vulnerability assessment. Training and guidance documents are available for these systems. For community systems that are not required to complete a vulnerability assessment we do encourage you to consider such an assessment as a valuable management/planning tool for your system since not only does it provide beneficial information but grant funds may be available in the future for security implementation projects which can be justified from the assessment. We also ask that you update this information in conjunction with your entire emergency plan. Please note that a vulnerability assessment does point out a system's weak points, so we recommend that you leave this section out when submitting your emergency plan to DES so that it does not become public information. Vulnerability assessment tools are available on the DES Water System Security website at www.des.state.nh.us/wseb.

Unpreventable Emergencies
Some emergencies are caused by reasons beyond the control of the water system. Floods, terrorism, vandalism, ice storms, earthquakes, droughts, power outages, truck accidents, train derailments, and labor problems are examples. Each system should assess its potential susceptibility to unpreventable emergencies. To do this, first think about unpreventable scenarios that could impact your system. For example, if a major highway, an active railroad track, and a geologic fault zone are located within your wellhead or surface water protection area, then accidents, derailments and earthquakes should be included in your vulnerability assessment. Next consider the possible impact of each scenario to the supply, storage, and distribution components of your system. Extensive detail is not necessary. Instead, our recommendation is to rate the likelihood of occurrence, briefly discuss the estimated impacts of each scenario to your system's critical assets, and then set forth the generic response actions of the system staff. You may want to also refer to your system's Source Water Assessment for additional information regarding vulnerabilities.

Preventable Emergencies
Other emergencies may be preventable. Age and obsolescence of equipment, lack of equipment, poor maintenance, poor system design, lack of spare parts, high risk or ill advised land usage near your source(s) of water, and lack of source protection efforts are all preventable factors that can cause water system emergencies. By identifying and managing preventable causes of emergencies, you can reduce the likelihood of an occurrence. List and briefly describe any vulnerable areas of your system that need correction or improvement and include a discussion of source protection efforts undertaken by this system.

Does this system have a formal equipment maintenance schedule?	Yes	No
Does this system participate in the sampling waiver program?	Yes	No
Would this system benefit from improved knowledge of available grant programs?	Yes	No

Section 6. Alternate Water Source

An emergency may necessitate obtaining water from an outside source, or modifying your current treatment capabilities, to meet your basic water needs. **Attach discussions of how this system could utilize the following during an emergency.**

Tank Trucks and/or Bottled Water

It is essential that all water systems plan for the contingency of having to provide water from an outside source during an emergency. A list of bottled and bulk water suppliers is available on DES fact sheet WD-WSEB 18-2 *Bulk Water Haulers Serving NH*. Due to high volume needs, tank trucks and bottled water may not be viable alternate water source options for the largest water systems in New Hampshire. **Discuss the feasibility of using bulk or bottled water and answer the following questions.**

Is tank truck/bottled water a viable alternate water source for your system?	Yes No
If you answered "Yes" above, have you discussed your potential water needs with at least two suppliers?	Yes No N/A
If you answered "Yes" above, approximately how long will it take for alternate water to reach this system?	hours

Water Supply Treatment

Discuss how this system could utilize its treatment capabilities during an emergency.

Tie-in to Adjacent Water Supply System

Discuss the feasibility of connecting to an adjacent water supply system for use as an alternate water source during an emergency. DES has provided Drinking Water Resource Maps to every municipality in New Hampshire. These maps show the location of all public water systems in a town. Sampling waiver maps are also good tools for locating nearby water systems. Please answer the following questions.

Does this system have a copy of the Drinking Water Resource Map for its town?	Yes No
Are any water systems situated adjacent to this system?	Yes No
Is it feasible for this system to connect to an adjacent system?	Yes No
Have you discussed the feasibility of connecting to another system(s) with representatives of that system(s)?	Yes No

New Source

An emergency may necessitate that your system develop a new source of water or use an inactive source. **Briefly describe this system's contingency plan for developing a new source or using an inactive source.**

Section 7. Boil Order

An emergency could occur if your drinking water source has been contaminated with microbiological pathogens. The presence of certain pathogens in drinking water is a significant health concern. If coliform monitoring indicates a pathogen risk, it may be necessary to implement a boil order. **Include a brief discussion of how this system would implement a boil order.**

Section 8. Water Conservation

Water conservation can be an effective means of coping with minor losses of source capacity. **Attach an assessment of how this system could use conservation measures during an emergency.** The assessment should include a quantification of unaccounted for water usage, the potential of this system to save significant quantities of water through conservation measures, and a prioritization of categories of water use that are marginal or nonessential in times of water shortage.

Section 9. Return to Normal Operation

Include a description of the follow-up actions and staff responsibilities that this system would undertake to return to normal operation.

Section 10. Plan Readiness

Include a list of people that have received a copy of the plan, plan locations, a schedule for rehearsals and a plan for discarding outdates plans and answer the following questions.

Do the key representatives of this system know about this emergency plan?	Yes	No
Does this system have a specific location where an up-to-date copy of its emergency plan is stored at all times?	Yes	No
Has this system clearly defined for each key person what his or her responsibilities will be during an emergency, i.e., does each key person clearly understand their role?	Yes	No
Has this system rehearsed its emergency plan?	Yes	No

Section 11. Signatures

Representatives of this water system must sign and date below. The signatures attest that all information provided herein and on the complete plan is true and accurate. **At least two signatures are required.**

system representative/title	date
system representative/title	date
system representative/title	date

Section 12. Emergency Plan Requirements

Env-Ws 360.15 requires that community public water systems serving over 500 people have a formal emergency plan. The plan must be reviewed annually by the water system and an updated plan submitted to the DES at least every 6 years. The plan should be updated locally as needed. Additionally the plan will be subject to review during the sanitary survey and it will be necessary to have a plan to participate in the sampling waiver program. We suggest that the plan have the same organizational format as this guide. This guide is available through the DES website at www.des.state.nh.us/wseb. Every system will be different in terms of the resources that will be needed to develop or update their plan. Grant funding is available each fall for source water protection activities.

Return Your Completed Emergency Plan To:

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